TRANSCODER AND ASSOCIATED SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR LOW-COMPLEXITY REDUCED RESOLUTION TRANSCODING

ABSTRACT OF THE DISCLOSURE

A transcoder is provided for transcoding data comprising a group of macroblocks representing a frame of data, where the frame of data can include a plurality of sample
5   lines each having a plurality of samples. The transcoder includes a decoder capable of decoding input data to thereby generate prediction error and decoded image data in the spatial domain. The transcoder also includes a downsampler capable of downsampling the prediction error or the decoded image data in a first (e.g., horizontal) direction and/or a second (e.g., vertical) direction different than the first direction to generate a
10   downsampled macroblock in the spatial domain. In addition, the transcoder includes an encoder. The encoder, then, is capable of encoding the downsampled macroblock into output data.